We Claim:

1. An active implantable medical device, in particular a defibrillator/cardiovertor, having:

means for delivering a therapy for treatment of tachycardia including at least one of defibrillation, cardioversion, ventricular antitachycardiac pacing and atrial antitachycardiac pacing,

means for sensing the ventricular and atrial activity including R-waves and P-waves, and

means for suspecting and confirming a presence of an episode of tachycardia in response to the sensed activity, said means including means for analyzing a stability of RR intervals and a stability of associated PR intervals,

wherein the improvement comprises:

means, operating in response to a detection of stable RR intervals and unstable PR intervals, for discriminating between atrial fibrillation with a fast ventricular rhythm and atrial fibrillation with a ventricular tachycardia, and for controlling delivery of a differentiated therapy according to said discrimination.

2. The device of claim 1, wherein the means for discriminating further comprises means for measuring an amplitude of the sensed P-waves, mean for analyzing the stability of said amplitudes, and means for determining the presence of an atrial defibrillation in the event of an instability greater than a preselected threshold.

3. The device of claim 1, wherein the means for discriminating comprises means for temporarily inhibiting the means for sensing the ventricular activity, means for analyzing the atrial frequency, and means for determining a presence of an atrial fibrillation in the event of an atrial frequency greater than the ventricular frequency.

4. The device of claim 1, wherein the means for discriminating further comprises means for temporarily inhibiting the means for sensing ventricular activity, means for determining an atrial capture, and means for determining a presence of an atrial fibrillation in the event of an absence of atrial capture.

5. The device of claim 1, wherein the means for discriminating comprises means for evaluating a conduction delay between the right atrium and the left atrium, means for analyzing the stability of said delay, and means for determining the presence of an atrial fibrillation in the event of an instability greater than a preselected threshold.

6. The device of claim 1, further comprising means for detecting a bi-tachycardia and controlling delivery of an adapted therapy, said bi-tachycardia detecting means operating when the means for discriminating detects the presence of an atrial fibrillation.

7. The device of claim 6, wherein the bi-tachycardia detecting means comprises means for analyzing a duration of RR intervals and determining a presence of a bi-tachycardia in the event of a detection of at least one cycle of a duration greater than a preselected threshold during a series of successive cardiac cycles.

8. The device of claim 6, wherein the bi-tachycardia detecting means comprises means for applying an atrial low energy shock therapy and evaluating the effectiveness of said therapy, and means for determining the presence of a bi-tachycardia in the event of persistence of atrial fibrillation after said therapy.

9. The device of claim 6, wherein bi-tachycardia detecting means comprise means for evaluating the heartbeat rate after a delay and determining the presence of a bi-tachycardia in the event of persistence of atrial fibrillation at the end of said delay.